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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RJS:NMO:JO:FP18068	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2003/000852	International Filing Date (day/month/year) 2 July 2003	Priority Date (day/month/year) 5 July 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ A62B 1/12		
Applicant FALLSAFE TECHNOLOGY PTY LTD et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of 2 sheet(s).

3. This report contains indications relating to the following items:

- | | | |
|------|-------------------------------------|---|
| I | <input checked="" type="checkbox"/> | Basis of the report |
| II | <input type="checkbox"/> | Priority |
| III | <input type="checkbox"/> | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| IV | <input type="checkbox"/> | Lack of unity of invention |
| V | <input checked="" type="checkbox"/> | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI | <input type="checkbox"/> | Certain documents cited |
| VII | <input type="checkbox"/> | Certain defects in the international application |
| VIII | <input type="checkbox"/> | Certain observations on the international application |

Date of submission of the demand 30 January 2004	Date of completion of the report 8 November 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer JEFFREY CARL Telephone No. (02) 6283 2543

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/AU2003/000852**I. Basis of the report****1. With regard to the elements of the international application:***

- ☐ the international application as originally filed.
- ☒ the description, pages 1-3, 5-8, as originally filed,
pages , filed with the demand,
pages 4, received on 6 September 2004 with the letter of 1 September 2004
- ☒ the claims, pages 10, 11, as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages 9, received on 6 September 2004 with the letter of 1 September 2004
- ☒ the drawings, pages 1/3-3/3, as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU2003/000852

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	YES
	Claims 1-12	NO
Inventive step (IS)	Claims	YES
	Claims 1-12	NO
Industrial applicability (IA)	Claims 1-12	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

- | | | | |
|------|------------|-------|------------|
| (i) | SU 820832 | (iii) | US 4437546 |
| (ii) | FR 2286662 | (iv) | US 5494133 |

Novelty (N) and Inventive Step (IS) Claims 1-12

Claim 1: All of the features defined in this amended claim are explicitly disclosed in each of citations (i) and (ii).

For example, in citation (i) at column 3, lines 8-12, there is described a descent apparatus having a cable whose free end (10) is attachable to a fixed structure (such as a building) with the remainder of the cable wrapped around drum (7). A person grips handles (13) and jumps from the building to descend. Gear pump (3) arranged between drum (7) and drum mounting axle (1) functions as a braking arrangement and controls the rotational speed of drum (7) and thus the speed of descent as the cable unwinds.

Similar comments apply to page 3 of citation (ii) which envisages an alternative construction having rope 6 attached to the building and the device being attached by a harness to the person evacuating the building.

Claims 2-12: The minor features added by each of these claims are also explicitly disclosed in either one of citations (i) or (ii).

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location from which the apparatus is directly suspended with the cable or rope unwinding at a controlled rate as the load or person descends, rather than an apparatus following a twisted configuration of a cable or rope which in turn has to have its lower end anchored at ground level in order to operate.

Disclosure of the Invention

The invention therefore envisages a descent apparatus for loads and/or persons, said apparatus including a cable or rope having one end adapted to fixed at an elevated location with the remainder of the cable or rope being wound around an inner pulley rotatably mounted within an outer housing via an axle shaft, wherein the outer housing is adapted to be attached directly to the load and/or person, and wherein the relative rotation between the inner pulley and the axle shaft is controlled by a closed circuit gear pump the gears of which form transmission means between the inner pulley and the axle shaft, said closed circuit gear pump forming part of a hydraulic circuit containing a constriction to control the speed of the pump and thus the speed of rotation of the inner pulley about the axle shaft and as a consequence the speed of descent of the descent apparatus as the cable or rope unwinds from the inner pulley.

Preferably the size of the constriction is fixed so as to provide a single predetermined speed of descent.

Alternatively the size of the constriction may be variable to provide for different speeds of descent.

Brief Description of the Drawings

One preferred embodiment of the invention will now be described with reference to the accompanying drawings, in which ,

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A descent apparatus for loads and/or persons, said apparatus including a cable or rope having one end adapted to fixed at an elevated location with the remainder of the cable or rope being wound around an inner pulley rotatably mounted within an outer housing via an axle shaft, wherein the outer housing is adapted to be attached directly to the load and/or person, and wherein the relative rotation between the inner pulley and the axle shaft is controlled by a closed circuit gear pump the gears of which form transmission means between the inner pulley and the axle shaft, said closed circuit gear pump forming part of a hydraulic circuit containing a constriction to control the speed of the pump and thus the speed of rotation of the inner pulley about the axle shaft and as a consequence the speed of descent of the descent apparatus as the cable or rope unwinds from the inner pulley.
2. A descent apparatus as claimed in Claim 1, wherein the size of the constriction is fixed so as to provide a single predetermined speed of descent.
3. A descent apparatus as claimed in Claim 1, wherein the size of the constriction may be variable to provide for different speeds of descent.
4. A descent apparatus as claimed in any one of the preceding claims, wherein the inner pulley includes as cup-shaped member having an open end closed by a closure member both of which members carry radially outwardly extending flanges between which a space is defined to retain the cable or rope around the pulley.
5. A descent apparatus as claimed in Claim 4, wherein the cup-shaped member and the closure member define an inner cavity which contains said closed circuit